

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (previously presented): A fan array fan section in an air-handling
2 system comprising:

- 3 (a) at least six fan units;
4 (b) said at least six fan units arranged in a fan array;
5 (c) an air-handling compartment within which said fan array of fan units
6 is positioned; and
7 (d) an array controller for controlling said at least six fan units to run at
8 substantially peak efficiency by strategically turning selective ones
9 of said at least six fan units on and off.

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1 Claim 2 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, wherein said at least six fan units are plenum fans.

3
1 Claim 3 (original): The fan array fan section in an air-handling system of
2 claim 1, wherein said air-handling compartment has an airway path, said airway path
3 being less than 72 inches.

4
1 Claim 4 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, wherein said at least six fan units are a plurality of fan units
3 arranged in a fan array configuration selected from the group consisting of:

- 4 (a) a true array configuration;
5 (b) a spaced pattern array configuration;
6 (c) a checker board array configuration;

- (d) rows slightly offset array configuration;
- (e) columns slightly offset array configuration; and
- (f) a staggered array configuration.

Claim 5 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein said at least six fan units include at least two vertically arranged fan units.

Claim 6 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is positioned within a fan unit chamber.

Claim 7 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is suspended within a respective said fan unit chamber such that there is an air relief passage therebelow.

Claim 8 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units is positioned within a fan unit chamber having at least one acoustically absorptive insulation surface.

Claim 9 (previously presented): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units are mounted in a grid system.

Claim 10 (original): The fan array fan section in an air-handling system of claim 1, wherein each of said at least six fan units has a fan wheel diameter, wherein spacing between said at least six fan units is less than 60% of said fan wheel diameter.

Claim 11 (cancelled):

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1 Claim 12 (cancelled):
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1 Claim 13 (cancelled):
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1 Claim 14 (cancelled):
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1 Claim 15 (cancelled):
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1 Claim 16 (cancelled):
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1 Claim 17 (cancelled):
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1 Claim 18 (cancelled):
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1 Claim 19 (cancelled):
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1 Claim 20 (cancelled):
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1 Claim 21 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, further comprising an array of backdraft dampeners, each
3 backdraft dampener in line with a respective fan unit.
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1 Claim 22 (cancelled):
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1 Claim 23 (currently amended): The fan array fan section in an air-
2 handling system of claim 1, wherein each fan unit has a peak efficiency operating range
3 outside of which it operates at a reduced efficiency, wherein said array controller is
4 programmed to operate said at least six fan units at substantially peak efficiency by

5 strategically turning off at least one ~~fan unit~~ fan unit operating at reduced efficiency and
6 running the remaining fan units within said peak efficiency operating range.

1 Claim 24 (cancelled):

1 Claim 25 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, said array controller is programmed to operate said at least
3 six fan units at peak efficiency for a performance level based on a criteria selected from
4 the following group of criteria:

- 5 (a) air volume;
- 6 (b) level of air flow;
- 7 (c) pattern of air flow; and
- 8 (d) number of fan units to operate.

1 Claim 26 (cancelled):

1 Claim 27 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, said array controller is programmed to operate said at least
3 six fan units to produce a stable operating point and eliminate the surge effects.

1 Claim 28 (cancelled):

1 Claim 29 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, said array controller is programmed to selectively control
3 the speed of each of said at least six fan units to run at substantially peak efficiency.

1 Claim 30 (cancelled):

1 Claim 31 (previously presented): The fan array fan section in an air-
2 handling system of claim 1, said air-handling compartment positionable within a
3 structure such that said air-handling system conditions the air of said structure.

1 Claim 32 (new): A fan array fan section in an air-handling system
2 comprising:

- 3 (a) a plurality of independently controllable fan units, each fan unit
4 comprising an inlet cone, a fan, and a motor;
5 (b) said plurality of fan units arranged in a fan array;
6 (c) an air-handling compartment within which said fan array of fan units
7 is positioned; and
8 (d) an array controller for controlling said plurality of fan units to run at
9 substantially peak efficiency by strategically turning selective ones
10 of said plurality of fan units on and off.

1 Claim 33 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein said plurality of fan units are plenum fans.

1 Claim 34 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein said air-handling compartment has an airway path, said airway path
3 being less than 72 inches.

1 Claim 35 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein said plurality of fan units are a plurality of fan units arranged in a fan
3 array configuration selected from the group consisting of:

- 4 (a) a true array configuration;
5 (b) a spaced pattern array configuration;
6 (c) a checker board array configuration;
7 (d) rows slightly offset array configuration;

- 8 (e) columns slightly offset array configuration; and
9 (f) a staggered array configuration.
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1 Claim 36 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein said plurality of fan units include at least two vertically arranged fan
3 units.
4

1 Claim 37 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each of said plurality of fan units is positioned within a fan unit
3 chamber.
4

1 Claim 38 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each of said plurality of fan units is suspended within a respective
3 said fan unit chamber such that there is an air relief passage therebelow.
4

1 Claim 39 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each of said plurality of fan units is positioned within a fan unit
3 chamber having at least one acoustically absorptive insulation surface.
4

1 Claim 40 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each of said plurality of fan units is mounted in a grid system.
3

1 Claim 41 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each of said plurality of fan units has a fan wheel diameter, wherein
3 spacing between said plurality of fan units is less than 60% of said fan wheel diameter.
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1 Claim 42 (new): The fan array fan section in an air-handling system of
2 claim 32, further comprising an array of backdraft dampeners, each backdraft dampener
3 in line with a respective fan unit.
4

1 Claim 43 (new): The fan array fan section in an air-handling system of
2 claim 32, wherein each fan unit has a peak efficiency operating range outside of which it
3 operates at a reduced efficiency, wherein said array controller is programmed to
4 operate said plurality of fan units at substantially peak efficiency by strategically turning
5 off at least one fan unit operating at reduced efficiency and running the remaining fan
6 units within said peak efficiency operating range.

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1 Claim 44 (new): The fan array fan section in an air-handling system of
2 claim 32, said array controller is programmed to operate said plurality of fan units at
3 peak efficiency for a performance level based on a criteria selected from the following
4 group of criteria:

- 5 (a) air volume;
- 6 (b) level of air flow;
- 7 (c) pattern of air flow; and
- 8 (d) number of fan units to operate.

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1 Claim 45 (new): The fan array fan section in an air-handling system of
2 claim 32, said array controller is programmed to operate said plurality of fan units to
3 produce a stable operating point and eliminate the surge effects.

4
1 Claim 46 (new): The fan array fan section in an air-handling system of
2 claim 32, said array controller is programmed to selectively control the speed of each of
3 said plurality of fan units to run at substantially peak efficiency.

4
1 Claim 47 (new): The fan array fan section in an air-handling system of
2 claim 32, said air-handling compartment positionable within a structure such that said
3 air-handling system conditions the air of said structure.